## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

FELD Yair et al

Serial No.:

09/691,889

Filed:

October 20, 2000

Nucleic Acid Constructs And Cells, And Methods For: Utilizing Same For Modifying The Electrochemical Condu

Of Excitable Tissues

Examiner:

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450 Group Art Unit:

Attorney

Docket: 00/20989

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56. The Examiner is requested to make these citations of official record in this application.

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Respectfully submitted,

Sol Sheinbein

Fortration No. 25,457

DEC 3 0 2004

PTO/SB/08a (08-03)

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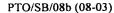
Complete if Known Substitute for form 1449A/PTO Application Number 09/691,889 Filing Date October 20, 2000 INFORMATION DISCLOSURE First Named Inventor FELD Yair et al STATEMENT BY APPLICANT Art Unit 1632 Examiner Name Falk (use as many sheets as necessary) Attorney Docket Number 00/20989 3 Sheet U.S. PATENT DOCUMENTS Pages, Columns, Lines, Where Examiner Cite Document Number Publication Date Name of Patentee or Initials\* MM-DD-YYYY Applicant of Cited Document Relevant Passages or Relevant Figures Appear Number-Kind Code<sup>2</sup> (uf known) 11-17-1998 Blake et al. US-5,837,220 1 Holmes et al. US-5,955,259 09-21-1999 2 US-6,013,766 01-11-2000 Elgoyhen et al. 3 US-6,087,488 4 07-11-2000 Ganetzky et al. 5 US-6,100,046 08-8-2000 Elgoyhen et al.

FOREIGN PATENT DOCUMENTS							
Examiner Initials* Cite No. 1 Country C		Foreign Patent Documents  Publication Date MM-DD-YYYY  Country Code <sup>3</sup> · Number <sup>4</sup> · Kind Code <sup>5</sup> (if known)		Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T 6	
	6	WO02/087419	11-07-2002	Marban et al			
	7	WO00/63434	10-26-2000	Abbott et al		lacksquare	
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	INF	ORMATION DISCLOSURE	Filing Date	October 20,				
STATEMENT BY APPLICANT				First Named Inventor	FELD Yair	et al		
	JIA	TEMENT BY MITERERIA		Group Art Unit				
		(use as many sheets as necessary)		Examiner Name				
Sheet	2	Of 3		Attorney Docket Number 00/20989				
		OTHER PRIOR ART – NON PAT	ENT LITERA	ATURE DOCUMENTS				
Examiner	Cite	Include name of the author (in CAPITAL LETTER	RS), title of the a	rticle (when appropriate), title	iate), title of the			
Initials	No.1	item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.						
	8 Feld et al. "Electrophysiological Modulation of Cardiomyocytic Tissue by							
		Transfected Fibroblasts Expressing Potass	s: A Novel Strategy to					
		Manipulate Excitability", Circulation 105(	(4): 522-9, 20	02.				
	9	Hammond et al. "Angiogenic Gene Therapy for Heart Disease: A Review of Animal						
		Studies and Clinical Trials", Cardiovasc Res 49(3): 561-7, 2001.						
	10	DeGroot et al. "Clinical Review 131: Gene Therapy for Thyroid Cancer: Where Do We Stand?", J Clin Endocrinol Metab 86(7): 2923-8, 2001.						
	11	Siegel "Biotechnology and Clinical Trials"						
	12	Reinlib et al. "Cell Transplantation as Future Therapy for Cardiovascular Disease?: A						
	Workshop of the National Heart, Lung, and Blood Institute", Circulation 101(18):							
		E182-7, 2000.  Roth et al. "Nonviral Transfer of the Gene						
	13							
		Patients With Severe Hemophilia A", N Engl J Med 344(23): 1735-42, 2001.						
	14	Fast et al, "Anisotropic conduction in monolayers of neonatal rat heart cells cultured						
		on collagen substrate", Circ Res. 1994 Sep;75(3):591-5.						
<u>-</u>	15	Marshall "Gene Therapy's Growing Pains", Science 269: 1050-1055, 1995.						
	16	Verma et al. "Gene Therapy - Promises, Problems and Prospects", Nature 389(6648): 239-42, 1997.						
	17	nnel						
		in vitro (rat cardiac myocytes) and in vivo	(rat liver). A	novel strategy for modif	fying			
	excitability.", J Clin Invest. 1995 Aug;96(2):1152-8.							
	18	Nuss et al, "Overexpression of a human p			1			
		hyperexcitability in rabbit ventricular myo	ocytes", J Clir	ı Invest. 1999				
		Mar;103(6):889-96.						
	19	Donahue et al, "Focal modification of ele	ction in the heart by vira	l gene				
		transfer", Nat Med. 2000 Dec;6(12):1395		200 t 0/0) +00 0 +00 =				
	20	Miller et al. "Targeted Vectors for Gene Therapy", FASEB J. 9(2): 190-9, 1995.						
	21	Orkin et al. "Report and Recommendation Investment in Research on Gene Therapy"						
		+	1					
		http://.nih.gov/news/panelrep.html (1975).	. C	C2C12 March Land C . O.	<u>.                                    </u>			
	22	Koh et al. "Differentiation and Long-Term Heart", J Clin Invest 92(3): 1548-54, 1993		C2C12 Myoblast Grafts	ın			
	23	Soonpaa et al. "Formation of Nascent Inte	ercalated Disk	s Between Grafted Fetal				
	] = -	Cardiomyocytes and Hot Myocardium", S						

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(use as many sheets as necessary)			Examiner Name				
Sheet	3	Of 3	Attorney Docket Number	00/20989			
	22	Rook et al, "Differences in gap junction channels between fibroblasts, and heterologous pairs", Am J Physiol. 199	een cardiac myocytes, 2 Nov:263(5 Pt 1):C959-	-77.			
	23	Gussoni et al. "Normal Dystrophin Transcripts Detecte					
		Dystrophy Patients After Myoblast Transplantation", Nature 356(6368): 435-8, 1992.					
	24	Freed et al. "Survival of Implanted Fetal Dopamine Ce	lls and Neurologic				
		Improvement 12 to 46 Months After Transplantation for Parkinson's Disease", N					
		Engl J Med 327(22): 1549-55, 1992.					
	25	Jockusch et al. "Long-Term Expression of Isomyosins and Myoendocrine Functions					
		in Ectopic Grafts of Atrial Tissue", Proc Natl Acad Sci					
	26	Bader et al. "Repair and Reorganization of Minced Car	Newt				
		(Notophthalmus Viridescens)", J Morphol 155(3): 349					
	27	Lerche et al. "Ion Channels and Epilepsy", Am J Med Genet 106(2): 146-59, 2001.					
	28						
		Repolarization, and Their Interaction", Circ Res 68(6):					
	29	Marom et al. "Modeling State-Dependent Inactivation of Membrane Currents",					
		Biophys J. 67(2): 515-20, 1994.					
	30	Marom "Slow Changes in the Availability of Voltage-Control of Voltage-		cts on			
		the Dynamics of Excitable Membranes", J Membr Biol 161(2): 105-13, 1998.					
	31	Marom et al. "State-Dependent Inactivation of the Kv3	Potassium Channel",				
		Biophysical Journal 67: 579-589, 1994.					

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